

Caltrans Heavy Equipment Mechanic Series

California State Personnel Board Specification

Series established May 4, 1993

Scope

This series specification describes three classes used by the California Department of Transportation which construct, repair and maintain automotive and heavy maintenance and construction equipment; instruct and lead the work of apprentices, helpers, Service Assistants (Automotive) or other employees in such work; or supervise the work of a group of skilled mechanics and helpers engaged in constructing, repairing and maintaining automotive and highway maintenance and construction equipment in the California state service; and do other related work.

Schem Code	Class Code	Class
QJ82	3713	Caltrans Heavy Equipment Mechanic
QJ60	6831	Caltrans Heavy Equipment Mechanic Leadworker
QJ50	6828	Caltrans Highway Mechanic Supervisor

Caltrans Heavy Equipment Mechanic Series Specification - Class Titles and Codes

Factors Affecting Position Allocation

Level, variety and complexity of assignments; degree of independent action, skill and decision; and the degree of direction or supervision exercised and received.

Definition of Levels

Caltrans Heavy Equipment Mechanic

Under direction, an incumbent inspects equipment to locate and determine the extent of necessary repairs and the corrective action necessary; maintains and repairs automobiles, trucks, tractors, personnel hoists, graders, snowplows, pumps, air compressors, diesel and gasoline engines and similar equipment; constructs new special equipment or modifies existing equipment including body frames and running gear; makes installation of, or repairs to, special equipment; operates and maintains tools and machinery used in the repair and maintenance of heavy maintenance and construction equipment; advises in the selection of parts and equipment; estimates repair costs; instructs operators in the proper operation and servicing of equipment; performs welding and brazing work; keeps simple records and completes reports; uses computer equipment to input time spent and tasks performed; may assist in instructing or giving direction to helpers, apprentices, Service Assistants (Automotive), or other employees; and performs other related work.

Caltrans Heavy Equipment Mechanic Leadworker

Under direction, incumbents typically perform difficult work or coordinate the repair or assembly of Caltrans' mobile equipment in shop locations; establish work priorities; promote shop safety; make decisions regarding difficult mechanical problems related to the construction, repair and maintenance of automotive and highway maintenance and construction equipment; may act in a lead capacity in assigning tasks, giving instructions, making recommendations regarding training needs, and may be asked to provide input to supervisors on the work performance of mechanics, machinists, apprentices, fusion welders, helpers and other workers; may act as advisor and provide direction for apprentices in the Heavy Equipment Mechanic Apprentice Program; analyze complex mechanical, hydraulic and electronic problems; input and retrieve data from the Equipment Management System (EMS) on main frame and personal computers; monitor hazardous waste storage areas

and time intervals for handling and disposal; may serve as a trainer at the Motorized Equipment Training Academy (META) in Headquarters or field shops; and do other related work.

Caltrans Highway Mechanic Supervisor

Under general direction, incumbents typically are either (1) in charge of an equipment repair or fabrication operation or directly supervise skilled workers in the repair facility and in the field; or (2) serve as a staff assistant to a Highway Equipment Superintendent in the Headquarters operation responsible for the statewide coordination of a specific activity.

Incumbents plan, assign and prioritize work within the limits of the resources available; maintain discipline; interact with the functional units to determine their service needs; ensure compliance with Biennial Inspection Terminals (BIT) Program, the Bureau of Automotive Repair's (BAR) Smog Programs and the Department's Preventive Maintenance (PM) Program; schedule preventive maintenance inspections of equipment; administer crane inspections; arrange for and act as contract administrator for various contracts pertaining to shop operations; monitor shop expenditures to assure they do not exceed allocations; compile estimates of cost and completion dates on proposed repairs; maintain good working relationships with vendors; and do other related work.

Minimum Qualifications

Caltrans Heavy Equipment Mechanic

Possession of a valid Class C driver license. (Applicants who do not possess the license will be allowed to compete in the examination, but the license must be obtained prior to appointment.) and Either I Completion of a recognized apprenticeship as a gas-and diesel-powered truck mechanic, or a heavy construction equipment mechanic. (Apprentices who are within six months of completing their apprenticeship program may be admitted to the examination, but they must present evidence of completion of a recognized apprenticeship before they may be appointed.)

OR II

Four years of varied mechanical experience consisting of diagnosis, repair and overhaul of major components on gas-and diesel-powered trucks or heavy construction equipment. An Associate of Arts Degree in Heavy Equipment Maintenance, Diesel Mechanics, or Heavy Equipment Mechanics or a certificate of completion from an accredited community college or equivalent degree or certificate approved by the California Superintendent of Public Instruction under the provisions of California Education Code Section 94310 may be substituted for two years of the required experience. (Students who are within six months of completing their degree will be admitted to the examination but must present evidence of completion prior to appointment.)

Caltrans Heavy Equipment Mechanic Leadworker

EITHER I

Experience: Two years' experience comparable to a Caltrans Heavy Equipment Mechanic in the California state service.

OR II

Experience: Five years' experience as a journeyman mechanic, at least two years of which shall have been within the last five years. (This time limitation is extended for a period equivalent to that spent in recognized military service during the last five years.) Two years of the five total years of experience shall have been spent in major repair and construction of gasoline-and diesel-powered highway maintenance and construction equipment. (Experience in the California state service applied toward this requirement must include at least two

years' experience comparable to a Caltrans Heavy Equipment Mechanic. Experience outside of California state service used to meet this requirement must be comparable in level to two years as a Caltrans Heavy Equipment Mechanic in the California state service.)

Caltrans Highway Mechanic Supervisor

EITHER I

Experience: One year experience as a Caltrans Heavy Equipment Mechanic Leadworker (formerly Highway Mechanic Supervisor I) in the California state service.

OR II

Experience: Five years' experience as a journeyperson mechanic. [Three years of the experience applied to this pattern must include: (a) two years' experience in the major repair and construction of gasoline-and diesel-powered highway maintenance and construction equipment experience, and (b) one year experience supervising the work of three or more journeyperson mechanics.] [Experience in the California state service applied toward this requirement must include one year experience as a Caltrans Heavy Equipment Mechanic Leadworker (formerly Highway Mechanic Supervisor I). Outside experience used to meet this requirement must be comparable in level to one year as a Caltrans Heavy Equipment Mechanic Leadworker (formerly Highway Mechanic Supervisor I) in the California state service.] (Thirty semester or the equivalent quarter units of college education in diesel technology, personnel management or a related field may be substituted for up to one year of the nonspecialized experience.)

Knowledge, Skills and Abilities

Caltrans Heavy Equipment Mechanic

Knowledge of: Methods, materials, tools and equipment used in construction, assembly, overhaul, repair and adjustment of gas-and diesel-powered trucks, heavy construction and maintenance equipment; operating characteristics of heavy construction and maintenance equipment and gas-and diesel-powered trucks; and basic occupational safety and health work practices to protect their own safety and health and the safety and health of others.

Skill in: Mechanical repair, adjustment, and fabrication of special equipment.

Ability to: Communicate effectively as required for successful job performance; fabricate, diagnose, repair and make adjustments to various equipment and systems (e.g., heavy construction and maintenance equipment, gas- and diesel-powered trucks and electronic systems); install and test pumps, motors and similar equipment; perform welding; estimate repair costs; work from drawings and sketches and make sketches of broken parts for replacement; make repairs in the field without supervision.

Caltrans Heavy Equipment Mechanic Leadworker

Knowledge of: All of the above, and construction, operation and repair of automobiles, trucks, tractors, loaders, graders, personnel hoists, hydraulic cranes, snowplows, pumps, motors, and other equipment used in the construction and maintenance of highways; methods, materials, tools, machines and shop equipment used to construct, repair and adjust highway construction and maintenance equipment; laws and regulations pertaining to the construction, operation and repair of highway construction and maintenance equipment, such as smog control and hazardous waste disposal; computer systems and electronic data collection systems and programs adequate to be successful in learning the Equipment Management System (EMS); requirements of air quality programs; basic occupational safety and health regulations contained in Title 8 Industrial Relations, General Industry Safety Orders, and safety and health policies and procedures as contained in the Department's Injury and Illness Prevention Program, including requirements of the Personal Protective Equipment (PPE) Program, the Hearing Protection Program, the Hazardous Materials Communications Program, the Respiratory

Protection Policy; industry preventive maintenance concepts; and the Department's Preventive Maintenance (PM) Program.

Ability to: All of the above, and learn the operation of the computer system used for the Equipment Management System (EMS); work independently; determine the condition of highway equipment and estimate the time and cost of repairs; establish realistic completion dates; communicate effectively at a level required for successful job performance, including effectively communicating technical instructions and providing on-the-job training to skilled technicians and communicating effectively with the functional units, supervisors and the public; prioritize and schedule work in cooperation with the functional units to best meet their needs; operate computer equipment, shop equipment and test equipment to diagnose electronic fuel injection systems and computer-controlled engine components; plan and coordinate the work of other staff; act in a lead person capacity; read, interpret and work from plans, drawings and specifications; analyze situations accurately and take effective action; apply laws and regulations pertaining to the construction, operation and repair of highway construction and maintenance equipment, such as smog control, Biennial Inspection of Terminals and hazardous waste disposal; and use tact and good judgment in directing highway equipment construction, repair and maintenance.

Caltrans Highway Mechanic Supervisor

Knowledge of: All of the above, and the Equipment Management System (EMS); contract administration; training and development practices; the Heavy Equipment Mechanic Apprenticeship Program; principles of effective supervision; progressive discipline; the employee grievance process; employee evaluation and probationary processes; the Department's Affirmative Action/Equal Opportunity Program objectives; a supervisor's role in the Affirmative Action/Equal Opportunity Program and the processes available to meet affirmative action/ equal opportunity objectives; the supervisor's role in maintaining an effective injury and illness prevention program; the Department's labor relations program.

Ability to: All of the above, and access, retrieve and interpret data contained in the Equipment Management System (EMS); interpret and apply the appropriate labor contracts; effectively contribute to the Department's affirmative action/equal opportunity objectives.

Additional Desirable Qualifications

All Levels:

A valid Class A or Class B driver license.

Caltrans Heavy Equipment Mechanic Leadworker

Caltrans Heavy Equipment Supervisor

Education equivalent to completion of the 12th grade.

Drug Testing Requirements

Caltrans Heavy Equipment Mechanic

Caltrans Heavy Equipment Mechanic Leadworker

Applicants for positions in these classes are required to pass a drug screening test. Testing of current employees who are applicants in an examination or who are transferring is permitted only if the person does not have a current appointment to a class for which drug testing is a requirement.

Class History

Class	Date Established	Date Revised	Title Changed
Caltrans Heavy Equipment Mechanic	11/03/1993	--	--

Class	Date Established	Date Revised	Title Changed
Caltrans Heavy Equipment Mechanic Leadworker	07/03/1941	04/04/1995	12/06/1994
Caltrans Highway Mechanic Supervisor	1931	12/06/1994	12/06/1994
Caltrans Heavy Equipment Mechanic Series History - Dates Established, Revised, and Title Changed			

Updated 6/3/2012